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09/942,360	08/29/2001	Christopher Peter Wieck	50R4605	8902

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Intellectual Property Department
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EXAMINER

VARTANIAN, HARRY

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/942,360	Applicant(s) WIECK, CHRISTOPHER PETER	
	Examiner Harry Vartanian	Art Unit 2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2001.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-25 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
 10) ☒ The drawing(s) filed on 29 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 309-311, 315, 330, and 370. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "315" has been used to designate both a controller in figure 3A and an amplifier in figure 4A. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required

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corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to because Figures 6-8 do not have the axes labeled. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: Claims 20-21 have matter that lacks support in the specification. It is not recited anywhere that the LNA threshold is greater than the RF amp and filter threshold, although it is implied. Since the Original Claims are self-supporting, this issue can be corrected by amending the specification.

Appropriate correction is required.

Claim Objections

5. Claim 25 is objected to because of the following informalities: There is a typo in the dependency of the Claim. Claim 25 should be dependent on Claim 22 NOT Claim 12. PLEASE NOTE THAT ANY REJECTION OR OBJECTION BELOW WILL ASSUME THAT Claim 25 IS DEPENDENT ON Claim 22. Appropriate correction is required.

6. Claim 10 is objected to because of the following informalities: There is a typo in the dependency of the Claim. Claim 10 should be dependent on Claim 9 NOT Claim 8. PLEASE NOTE THAT ANY REJECTION OR OBJECTION BELOW WILL ASSUME THAT Claim 10 IS DEPENDENT ON Claim 9. Appropriate correction is required.

7. Claim 2 is objected to because of the following informalities: the threshold should be -90.5 dBm NOT +dBm. Appropriate correction is required.

8. Claims 1-11 are objected to because of the following informalities: In Claims 1 and 3, "said threshold" should read "said **predetermined** threshold". Claims 2 and 4-11 are objected to for being dependent on an objected base Claim. Appropriate correction is required.

9. Claims 9-10 are objected to because of the following informalities: "said computer instructions" should read "said **set of** computer instructions". Appropriate correction is required.

10. Claims 12-21 are objected to because of the following informalities: In Claims 12-13, and 17 the acronym RF is not defined. Claims 14-16 and 18-21 are objected to for being dependent on an objected base Claim. Appropriate correction is required.

11. Claim 14 is objected to because of the following informalities: The acronym SPST is not defined in the Claim OR the specification. Please correct in both instances.

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12. Claim 16-17 and 24 are objected to because of the following informalities: The acronym *RSSI* has a slightly different interpretation in the art than *RSS*. Please change all *RSSIs* to *RSS*.

13. Claims 19-21 are objected to because of the following informalities: In Claims 19 and 21 the acronym *RSSI* is not defined. (PLEASE ALSO SEE SECTION 12 OF THIS OFFICE ACTION PRIOR TO MAKING ANY CHANGES) Claim 20 is objected to for being dependent on an objected base Claim. Appropriate correction is required.

14. Claims 22-25 are objected to because of the following informalities: In Claims 22, "said threshold" should read "said **predetermined** threshold". Claims 23-25 are objected to for being dependent on an objected base Claim. Appropriate correction is required.

15. Claim 25 is objected to because of the following informalities: The Claim improperly incorporates the structure "switching means" under 35 U.S.C. 112 6th paragraph for the function "bypassing means". Appropriate correction is required. A recommended change would be "wherein said means for bypassing is coupled to an input of the filter..."

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

16. Claims 1-25 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In paragraph 46(Please note paragraph references are based on the 2003/0081694 PG-PUB version), the applicant states that the filter and RF amp are engaged when the *RSSI* is

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greater than the predetermined threshold or bypass point. This is contrary to the gist of the invention, since the filter and RF amp should be DISABLED when the RSSI is greater than the threshold in order to save power. The same contradiction is made in the last sentence in paragraph 46. Correspondingly, if this interpretation is correct, figure 3B is incorrect since it shows that the filter and RF amp are bypassed if the RSSI is **NOT** greater than threshold. The same mistake is made in figure 4B. Please call if you have any questions. Appropriate correction is required.

17. Claims 17 and 24 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The limitation "if the RSSI is outside the predetermined range" is not consistent with the essence of the invention since it implies that the filter and RF amp and filter could be bypassed if the RSSI is **below** the "predetermined range", which does not make sense. The filter and RF amp should only be bypassed if the RSSI is above a predetermined range. **Please note that if the applicant amends the specification and Claim to recite that the RF Amp and filter is bypassed if the RSSI is above the predetermined range, a new matter issue can arise.** Examiner recommends that this matter be canceled from both the Claims and specification. Please call if you have any questions. Appropriate correction is required.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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18. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 7 recites the limitation "said mixer output". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

19. Claims 1-2, 5, 9-16, 22-23 and 25 are rejected under 35 U.S.C. 103(a) as being anticipated by Kaufman et al(US Patent# 6,208,202). Kaufman et al discloses a filter and amplifier bypass circuit that is used whenever excess gain and output power are not needed(Abstract and fig 5). Kaufman fails to *explicitly* teach the step of measuring the received signal strength and compare it to a threshold.

Although the step of measuring signal strength is not explicitly stated, it is implied by Kaufman in (Column 2, Lines 16-47) and is a very common step in CDMA receivers.

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Moreover, the applicant in para 0032 admits comparing the received signal strength to a threshold in order to disable a power amplifier as prior art. Therefor, it would have been prima facie obvious to measure the received signal strength prior to disabling a second stage amplifier. A motivation to combine is that the signal strength measurement and comparison is necessary in order to know when amplification is needed.

Regarding Claims 2, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use threshold values -90.5 and -106 dBm. Applicant has not disclosed that using threshold values of -90.5 and -106 dBm provides an advantage, is used for a particular purpose, or solves a stated problem. Therefor it is a design choice.

Regarding Claim 5, Kaufman et al meets the following limitations of the Claim:

- a filter having an input coupled to the LNA output and a filter output, **fig 5**

- an amplifier having an amplifier input coupled to the filter output and an amplifier output, and **fig 5**

- a bypass circuit comprising a bypass switch coupled between the input of the filter and the amplifier output; and **fig 5**

- said step of bypassing comprises closing the bypass switch. **fig 5**

The use of a LNA in Claim 5 is admitted as prior art by the applicant in para 33 and figure 1A.

Regarding Claims 9-11 and 23, the applicant admits in para 0069 that it takes only ordinary skill in the computer art to implement this CDMA bypass receiver on a computer, which is well- known to have computer readable media and memory.

Regarding Claims 12 and 25, the rejection for Claim 5 above meets the limitations of the Claim. Specifically for Claim 12, Kaufman et al discloses the use of a RF amplifier in the

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abstract wherein a RF-signal is described as being amplified at the power amplifier in fig 5, item 32. Moreover, the use of a control device in a bypass circuit is admitted as prior art by the applicant in fig 1a, item 120 which is described as a conventional LNA bypass circuit.

Regarding Claim 13, Kaufman et al meets the following limitations of the Claim:

wherein the first bypass circuit comprises a switch coupled between the input of the filter and the RF amplifier output. **fig 5, item 20**

Regarding Claims 14-15, the use of a SPST or a transistor as a switch was well-known in the art at the time the invention was made.

Regarding Claim 16, the same rejections for Claims 1 and 12 are also applicable.

Regarding Claim 22, the same rejections for Claims 1 and 12 are also applicable.

20. Claims 17 and 24 are rejected under 35 U.S.C. 103(a) as being anticipated by Kaufman et al(US Patent# 6,208,202) in view of Igarashi et al(US Patent# 6,351,504). Kaufman et al meets all the limitations of Claims 17 and 24(see above rejections) except bypassing of the second stage amplifier if the received signal strength is outside of a predetermined range.

However, Igarashi et al's CDMA receiver has the following feature:

"According to the embodiment of the present invention, when the **reception signal level falls within the first smallest range** and increases with the lapse of time, **the reception signal bypass circuit is placed in the non-connected state to allow the high-frequency amplifier to execute** only the automatic gain control thereby obtaining the disturbance signal level greater than the reference line in the IS-95. **When the reception signal level reaches the second range larger than the first range, the reception signal bypass circuit is connected to bypass the high-frequency amplifier...**" (Column 6, lines 19-42)

Therefor it would have been prima facie obvious to disable or bypass an amplifier stage based on "a reception level range". A motivation to combine is that a target range rather

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than one target level is more robust, since a minimum required received signal strength can greatly vary depending on the system data rate requirements.

21. Claims 18-21 are rejected under 35 U.S.C. 103(a) as being anticipated by Kaufman et al (US Patent# 6,208,202) in view of Walker (US Patent# 6,445,247). Kaufman et al meets all the limitations of Claims 18-21 (see above rejections) except disclosing a second bypass circuit using a second threshold.

However, Walker's high efficiency power amplifier has the following features:

The respective threshold comparison signals output by threshold detectors 104A-104N are also received by a corresponding plurality of bypass switches 112A-112N, 114. **In one embodiment, each bypass switch 112A-112N, 114 bypasses its respective remaining amplifier stages 103A-103N when the respective threshold comparison signal that particular bypass switch receives is at the first level, and couples an amplified signal from a previous amplifier stage 101 or 103A to a remaining amplifier stage 103A-103N when the respective threshold comparison signal that bypass switch receives is at the second level.** As a result, when the respective thresholds for threshold detectors 104A-104N are configured as described above, the bypass switches 112A-112N, 114 will tend to bypass their respective remaining amplifier stages 103A-103N when **the input signal amplitude envelope is relatively low, and will each "trip" independently** (i.e. transition from bypassing remaining amplifier stages to not bypassing remaining amplifier stages) as the input signal amplitude envelope increases. **(Column 6, Lines 47-65)**

Specifically for Claim 20, Walker states:

"...detector 102 in response thereto, none of the threshold detectors 104A-104N may "trip" in response to the envelope detection signal. Additionally, as the input signal amplitude envelope detected **by envelope detector 102 increases**, and therefore the envelope detection signal output by envelope detector 102 **increases proportionally in response thereto, each of the threshold detectors 104A-104N may independently trip in response to the increasing envelope detection signal.** It is clear that other embodiments may use other threshold configurations resulting in different but predictable behavior." **(Column 6, Lines 3-11)**

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Each threshold is progressively higher than the first causing subsequent amplifiers to "trip" or become bypassed when the envelope level increases.

Therefor, it would have been prima facie obvious to have a subsequent amplification stage be bypassed if the signal level is sufficiently high for reception. A motivation to combine is disclosed by Walker wherein he describes that individually bypassed amplifiers can save supply power and improve efficiency(Column 7, Lines 16-30).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

22. Claims 1 and 22 rejected under the judicially created doctrine of double patenting over Claims 4 and 1, respectively, of U. S. Patent No. 6,668,028 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: The application and patent both Claim a method and apparatus for bypassing a filter and second stage amplification. The only difference is that the patent specifically Claims using a CDMA signal and a bypass threshold of -90 dBm.

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Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

23. Claim 2 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claim 4 of U.S. Patent No. 6,668,028. Although the conflicting claims are not identical, they are not patentably distinct from each other because the threshold level of -90.5 dBm (Please see SECTION #7 above) is very close to the -90 dBm claimed in the patent.

24. Claims 9-11 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claim 4 of U.S. Patent No. 6,668,028. Although the conflicting claims are not identical, they are not patentably distinct from each other because implementing the bypass circuit method on a computer using software would have been obvious to one skilled in the art at the time of the invention.

25. Claims 23 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claim 1 of U.S. Patent No. 6,668,028. Although the conflicting claims are not identical, they are not patentably distinct from each other because implementing the bypass circuit "using computer means" would have been obvious to one skilled in the art at the time of the invention.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry Vartanian whose telephone number is 571.272.3048. The examiner can normally be reached on 10:00-6:30 Mondays to Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571.272.3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Harry Vartanian
Examiner
Art Unit 2634

HV



STEPHEN CHIN
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